

# Course Syllabus

## Environmental Studies 303: Human Ecology and Sustainability

Instructor: Rebekah Green, Ph.D., rebekah.green@wwu.edu

### Introduction

This course will introduce you to the study of humans as organisms and as a species in our environment – which is, of course, now effectively the entire earth. We will study the interactions between human and natural systems, and their outcomes on sustainability. Topics include human effects on natural systems, and the way natural systems have shaped our energy use, food consumption, population size, all within the context of solving environmental problems.

The ecology of any organism depends on the characteristics of that organism in relation to its bio-physical setting. First, this entails understanding the most ecologically relevant aspects of humans – ourselves, individually and in various sizes of “groups.” We will need to understand something about our evolution and development, and how we organize institutions at various scales to begin to understand what aspects of ourselves are most relevant to discussions of sustainability. There are various ways of learning about ourselves that may lend not just knowledge and insight, but also practical ways forward. So this course necessarily is about humans, and about knowledge.

Second, we will look at the “bio-physical settings” in which humans live. Our focus will be on understanding the links and interdependencies between “natural systems” and “human systems.” These linkages or couplings are indeed now so pervasive that one of the necessary challenges of human ecology is to find ways of understand both “kinds” of systems in one approach, which nonetheless accommodates the great variety in time and spatial scale, as well as qualitative differences, such as between different biome-human ecologies. We will revisit a variety of ecological concepts in light of human ecology.

We will begin to apply what we learn about humans as organisms, and human-nature coupled systems to inquire critically about what we mean by “sustainability.” This is a course where we will no doubt ask more questions than we conclusively answer. This is not surprising, because arguably no one can claim at this time to have “solved” the intellectual or the practical problems of attaining “sustainable” ecological relations of humans! As in other questions that concern the future, we are more or less on the same footing here! Welcome to the discussion—if you choose to take this course, you will be expected to actively participate in it.

### Learning Goals

- A. To understand:
  - a. current definitions of sustainability
  - b. common characteristics of human-nature coupled systems
  - c. how strategies for subsistence shape human social organization
  - d. how humans respond and adapt to their natural world uniquely by ways of physiology, learning, language, social organization, culture and symbolism.
  - e. the use of energy, information and materials in different cultures and the environment effects of these uses.
  - f. successful and failed adaptive regimes and resource management strategies.
- B. To apply:
  - a. conceptual frameworks in human ecology & sustainability to at least two cases of human-nature coupled systems using contemporary theories of human ecology (Island County, most serious problems, research paper)

- C. To analyze:
  - a. how interactions with the environment effect human groups, institutions, and landscapes
  - b. multiple contemporary cases of resource use, human communities can adapt to environmental constraints to achieve sustainable societies at local, regional and global scale.
  
- D. To evaluate:
  - a. definitions and models of sustainability
  - b. current impediments to achieving sustainable human-nature coupled systems
  - c. proposed strategies for shifting human-nature coupled systems towards sustainability
  
- E. To create:
  - a. a personal definition or concept map of sustainability
  - b. personal change in light of sustainability principles

## Required Text and Resources

- Moran, E. F. (2006). *People and nature: An introduction to human ecological relations*. Oxford: Blackwell Publishing.
- White, R. (1991). *Land use, environment, and social change: The shaping of Island County, Washington*. Seattle: Univ. of Washington Press.
- Please purchase a **headset** for your computer. We will be using a live discussion feature to meet virtually several times this quarter. Using a headset will reduce feedback from your computer. Headsets can be purchased at the campus bookstore or online starting from \$6 and up. An inexpensive headset will work just fine for our uses.
- Diamond, J. (2005). *Collapse: How Societies Choose to Fail or Succeed*. London: Viking Press. (Optional)
- Other readings available via Canvas, under each module.

## Grading Rubric

Assignment	Quantity	Pts Each	Total Points	% Grade
Module Quizzes	10	5	50	20%
Module Discussions/Activities	~20	Generally 3pts	60	24%
Individual Short Assignments	5	5	25	10%
Online/In-person Meetings	3	5	15	6%
Essay	3	15	45	18%
Final paper	1	40	40	16%
Final Presentation	1	10	10	4%
			<b>245 pts</b>	<b>100%</b>

Grading rubric subject to change as course evolves during the quarter. Changes will be modest and I will try to keep general weight of assignment types in the overall grade close to the table above.

A	≥	93%
A-	≥	90%
B+	≥	87%
B	≥	83%
B-	≥	80%
C+	≥	77%
C	≥	73%
C-	≥	70%
D	≥	65%
F	≥	54%

### Assignment Policy:

- Late essays will receive a 10% reduction for each 24-hour period after the due date and time. Exceptions follow university policy for Medical Leave of Absence (via Student Health Center), and Emergency (Non-Medical) Leave of Absence (via Office of Student Life. No assignments will be accepted more than one week late.
- No late discussion posts accepted.
- Any student with a disability that may affect their performance in this class is encouraged to speak to the instructor or the Office of Student Life (360-3844) to arrange for suitable accommodation.

### Learning Challenges:

- 1) **Module Quizzes.** For each module of the course, you will be given a set of readings, and in some cases, a set of short video lectures to view. After completing the readings and lecture material, you will take a timed, multiple-choice quiz on the material. Each quiz will be pulled from a bank of questions; if you fail the quiz the first round through, you are welcome to take it one more time. However, you will face new questions. Do the readings and lectures before you take the quiz. Your quiz grade will be the score you receive on the last quiz attempt.

Once you have taken the quiz, you will be allowed to enter discussions and learning activity sections of the module.

- 2) **Discussions/Learning Activities.** For each module, I will open up several discussions or learning activities.

For discussions, you are assigned to a small discussion group consisting of 6-7 students. You will be able to see other student entries AFTER you have posted your entry. Being in these smaller discussion groups will make it easier to read through and respond to everyone's posts, without being overwhelmed. It will also allow you to get to know a smaller subset of the class well. For your final project, you will be working with 2-3 of these students to research a human-nature coupled system of your choice. If an exceptional thread develops in one discussion group, I will cross-post entries to other groups or provide commentary to the entire class.

*Discussion Initial Posts and Responses.* Respond to discussion questions with a >100 word summary of the pertinent reading assignment (1pt), and >200 word synthesis or opinion related to the readings and question posed (1pt).

After other students have posted their responses, you will need to make a minimum of two responses >100 words each to other discussion posts (1pt). In these responses, explain what you agree with, where you disagree and why, and what further you can add to their argument or what additional questions their post raises. You are free to add more responses and the conversation dictates.

In your initial post and two responses, please show a strong knowledge of the assigned class readings to date. Cite and directly quote class readings, as well as material from outside the course. Please do bring your own experience into the conversation. We are discussing the human species, so our individual perspectives and experiences are all valid data points. However, please do not use your own experience to jump to broad, unsubstantiated generalizations.

When bringing up an environmental or social issue, please incorporate verifiable, cited facts into your argument. Here's an example:

Unacceptable: "we are creating a huge problem because we are overfishing our oceans."  
*This is a broad generalizations, unsubstantiated and a value judgment. What makes it a huge problem? According to whom?*

Acceptable: "According to [Seafood Watch](#), commercial fishing fleets are fishing 85 percent of the world's fisheries at full capacity (or beyond) or have already fished them to collapsed." *Note I stated a specific who, a specific what and a source using a hyperlink.*

### **Discussion Grading:**

Initial posts will be graded on a 2/1/0 pts basis.

2 pts – initial response is well-crafted, error-free, articulate argument grounded in class material using citations to refer to specific pages of the class reading or hyperlinks or full

citations to any outside material. Initial entry is at least 300 words posted and at least 48 hours before discussion due date.

1pt – initial post is a summary of the reading only, posing no synthesis or opinion. Or, initial post is as above, but is less than 300 words.

0pt – initial post is an opinion only, showing little or no evidence of understanding the reading.

Responses will be graded on a 1/0.5/0 basis.

1 pt – two well-crafted, error-free and articulate responses showing agreement, disagreement and extending the argument with additional evidence from reading or posing new question. Responses completed by discussion due date.

.5 pts – one response as above

0 pts – no responses or responses that fail to meet the criteria above.

**No late posts will be accepted.**

*Discussion Activities.* Some discussions are designed as group activities. For these, you should actively participate in the activity (e.g. build a group definition of sustainability, develop a ranked list of problems, etc.); a minimum or maximum number of posts is not relevant. You will be graded on your group's final outcome (1pt) and your participation in it (1pt). If you contribute minimally or not at all, you will receive no points.

- 3) **Three take-home essays** on each of the three major sections of the course. The first will focus on broad ideas about human-nature systems, including cultural evolution and ecology. The second will focus on the Island County case study. The third will concern humans' positive potentials for more sustainable ecologies. For each I will give you four questions; you will choose two of them and write 700 words each (not including your reference list). Your response should demonstrate a strong understanding of lectures, readings, activities and discussions. You are welcome to use resources in addition to those assigned, but you must cite and discuss in depth several class readings in a standard style (APA preferred, but not required).
- 4) **Final paper and presentation.** In groups of three, you will write an in-depth group paper of 6,000 words or more on a theoretically-informed description of a specific coupled human-natural system which you investigate. The topic should explore how humans interact with a natural resource, considering both how they impact the resource and how their society is shaped by the resource. This resource could be a geographic place, a non-human species, or a non-living material.

Each person in the group should individually research and write about a specific example or aspect of this human – nature interaction, using appropriate citations for all researched material. (For example, in a group selects human interactions with sheep, one member could research Iranian nomads, another New Zealand wool production, and another industrial agricultural production of veal.) The final paper will include both jointly written sections (introduction, discussion and reflection) and individually written sections on each case study. Your group will present your research in a 12 minute online video presentation.

I will look for excellence in a) conceptualization, b) depth or research, c) a lucid and critical evaluation of course readings and topic-specific sources, and d) accepted use of English in grammar and construction. Please organize an outline PRIOR to writing and PROOFREAD your final draft before submission. You can upload a final draft of your paper to the Writing Center at [www.acadweb.wvu.edu/writingcenter/](http://www.acadweb.wvu.edu/writingcenter/). The Center will review your draft for clarity, organization, grammar, and punctuation; typically they respond within 48 hours, but it may be longer at the end of the quarter.

## Plagiarism

Plagiarism will not be tolerated. Proper in-text and bibliographic citation using APA or another commonly used format is **mandatory**. Using citations, your paper should clearly distinguish between your analysis (your ideas, your comparison or contrasting or other's work, your application of a (cited) idea), and the ideas of others. In-text citations should include page numbers for all direct quotes or paraphrases of specific sections in another author's work. In-text citations without page numbers can be used when you are referencing or describing the overarching theme or content of another person's work. Your paper should end with a full list of all works cited, using APA or another standard bibliographic format. For help using the APA style, feel free to use online citation helpers such as <http://www.calvin.edu/library/knightcite/index.php>.

All essays and final papers will be submitted through Turnitin in Canvas. This feature will note all locations where your writing closely matches online material, academic articles and other sources. Uncited closely matched text will be closely evaluated for plagiarism. If plagiarism is found in any assignment, you will receive a failing grade in the assignment or course, depending upon severity. All cases of plagiarism will be reported to the Academic Dishonesty Board. Familiarize yourself with what the term means at: <http://libguides.wvu.edu/plagiarism>.

## ENVS 303 Summer Online 2013 – June 25-August 8

### SCHEDULE OF TOPICS AT A GLANCE, READINGS & ASSIGNMENTS (subject to some revision):

Open	Closed	Module	Readings/	Mini Lectures	Discussions	Indiv. Assignments	
June 25	June 28	1 – intro	Moran ch 1; syllabus		M1D1: Intros M1D2: Our Relation with Nature	Login to Collaborate Session	
June 25	July 2	2 - Sustainability		State of Planet film (20min) M2L1: Origins of Sustainability M2L2: Critique of Bruntland	M2D1: Definitions of Sustainability M2D2: Most Serious Problem M2D3: Ranking Problems	--	
July 1	July 5	3- HNC systems	Liu et al Moran ch 2, pp. 26-38 Two NG case studies	M3L1: Principles of HNC systems M3L2: Human Ecology-Creation Myths M3L3: Human Ecology-Foci	M3D1: HNC systems in Most Serious Problems	National Geographic Case Study worksheet	
July 3	July 9	4 – Cultural Evolution	Kemp Rappaport Cook Moran ch 2, pp. 39-56	Faces of Culture film-Foragers (30min) Faces of Culture film-Producers (30min) --	M4D1: Subsistence Patterns Compared	Eskimo and Tsembaga comparison	
July 8	July 11	5 – Collapse	Moran Ch 4 Diamond ch 14	M5L1: Theory of Collapse M5L2: Easter Island M5L3: Norse Greenland	M5D1: Most Serious Problems and Collapse	<b>ESSAY 1 DUE Sunday July 14</b>	
July 9	July 14	6 –Island Co, part 1	White, Intro-Chapter 3	White images (photos only)	M6D1: Salish and Settlers Shaping Landscape	Island County part 1 Perception Comparison	
July 12	July 20	7 – Island Co, part 2	White, Chapter 4-Conclusion	White images (photos only)	M7D1:Cultural Assumptions of Stump Farming and Tourism Era	Island County part 2 Logging comparison	
July 18	July 23	8 – Decision Making	Moran Chapter 5 Skim Cosmides and Tooby		M8D1: Empathy and Environmental Decision Making	<b>ESSAY 2 DUE Tuesday July 23</b>	
July 22	July 28	9 – Tragedy of Commons	Hardin Ostrom Moran Ch 6-7	M9D1: Hardin revisited M9D2: Population M9L2: YouTube Ostrom Video	<b>ONLINE FISHERIES GAME</b> M9.D1: Fisheries Management Reflection	Fisheries Reflection	
July 26	July 30	10- Alternatives	Daily Wackernagel Moran Ch 8 Diamond Ch 15	Film: The Power of Community M10L1: Mind Maps	M10D1: Moving Towards Sustainability	<b>ESSAY 3 DUE Thursday August 1</b>	
July 31	August 5	FINAL PROJECT WORK	Research on a human-nature coupled system in groups of 3 or 4 students; write individual case studies and joint analysis				
August 6	August 8	FINAL PRESENTATIONS	Groups to present research in 12 minute online Collaborate presentation; others to comment and review				<b>FINAL PAPERS DUE Friday August 9</b>

## Readings:

Cook, E., "The Flow of Energy in an Industrial Society," *Scientific American*, 1971, p. 135.

Cosmides, L, and Tooby, J. "Evolutionary Psychology: A Primer," Center for Evolutionary Psychology, University of California, Santa Barbara, 1997, <http://www.psych.ucsb.edu/research/cep/primer.html>.

Daily, G, Soderqvist, T, Aniyar, S, Arrow, K. et al. "The Value of Nature and the Nature of Value" *Science*, 2000, p. 395.

Diamond, J. 2005. *Collapse: How Societies Choose to Fail or Succeed*. London: Viking Press.

Hardin, G. "The Tragedy of the Commons," *Science*, 1968, p. 1243.

Horwitz, P. and Finlayson, C. "Wetlands as Settings for Human Health: Incorporating Ecosystem Services and Health Impact Assessment into Water Resource Management," *Bioscience*, 2011, p. 678.

Kemp, W. "The Flow of Energy in a Hunting Society," *Scientific American*, 1971, p. 104.

Lui, J., Dietz, T., Carpenter, S., Alberti, M., Folke, C., Moran, E., Pell, A., Deadman, P., Kratz, T., Lubchenco, J., Ostrom, E., Ouyang, Z., Pervencher, W., Redman, C., Schneider, S., Taylor, W., "Complexity of Coupled Human and Natural Systems," *Science*, 2007, p. 1513.

Moran, E. F. (2006). *People and nature: An introduction to human ecological relations*. Oxford: Blackwell Publishing.

Ostrom, E. "A Diagnostic Approach for Going Beyond Panaceas," *PNAS*, 2007, p. 15182.

Rappaport, Roy A. "The Flow of Energy in an Agricultural Society," *Scientific American*, 1971, p. 116.

Wackernagel, M., Schutz, N., Deumling, D., Callejas, A et al. "Tracking the Ecological Overshoot of the Human Economy," *PNAS*, 2002, p. 9266.



Wilcox, M. "Marketing conquest and the vanishing Indian: An Indigenous response to Jared Diamond's *Guns, Germs, and Steel* and *Collapse*," *Journal of Social Archaeology*, 2010, p. 92.

White, R. (1991). *Land use, environment, and social change: The shaping of Island County, Washington*. Seattle: Univ. of Washington Press.

### **National Geographic Case Studies:**

#### **Foragers**

Finkel, M. "The Hadza," *National Geographic*, Dec 2009, <http://ngm.nationalgeographic.com/2009/12/hadza/finkel-text>.

Quammen, D. "Kamchatka Salmon: Where the Salmon Rule," *National Geographic*, Aug 2009, <http://ngm.nationalgeographic.com/2009/08/kamchatkasalmon/olson-text>.

#### **Pastoralist or Horticulturalist/Pastoralists**

Finkel, M. "Stranded on the Roof of the World," *National Geographic*, Feb. 2013, <http://ngm.nationalgeographic.com/2013/02/wakhan-corridor/finkel-text>.

Bunting, B. "Bhutan: Kingdom in the Clouds," *National Geographic*, May 1991, p. 79.

#### **Horticulturalists**

Roberts, D. "Below the Cliff of Tombs: Mali's Dogon," *National Geographic*, Oct 1990, p. 100.

#### **Industrial Agriculturalists:**

Draper, R. "Australia's Dry Run," *National Geographic*, April 2008, <http://ngm.nationalgeographic.com/2009/08/kamchatka-salmon/quammen-text>.

**Films:**

Abrams, I. R., & Bishop, J. (Producer). Womack, M. (Writer). (1994). Patterns of subsistence: Foragers and pastoralists, Faces of Culture Series, Program 7[video recording]. Coastal Community College District in cooperation with Harcourt, Brace College Publishers.

Abrams, I. R., & Bishop, J. (Producer). Womack, M. (Writer). (1994). Patterns of subsistence: The food producers, Faces of Culture Series, Program 8[video recording]. Coastal Community College District in cooperation with Harcourt, Brace College Publishers.

Morgan, F., Murphy, E., Quinn, M. (Producer). Morgan, F. (Director). (2006). The Power of Community: How Cuba Survived Peak Oil [vidorecording]. Yellow Springs, Ohio: Community Service Inc.